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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

SICK WITH *ICH*

Researchers at the University of Georgia College of Veterinary Medicine are using biotechnology to develop a vaccine for *Ichthyophthirius multifiliis*, or *Ich*, a common protozoan parasite that kills freshwater fish by clogging their gills until they suffocate. Experts in the field of fish disease consider *Ich* infections to be a major problem in fish production world-wide.

In experiments largely funded by USDA's Cooperative State Research Service, scientists have isolated a gene encoding a protein located on cilia, tiny projections which cover the surface of the parasite like hairs. *Ich* uses its cilia for swimming and attaching to fish. The protein, or antigen, triggers the fish's immune response and may be responsible for protecting fish from infection. The scientists have gotten positive results after injecting fish with small amounts of the ciliary antigen. They are now using genetic engineering techniques to produce larger quantities for vaccine trials. They also hope to express the protein using a novel approach which may have wide application for the prevention of parasitic diseases in fish as well as in other animals. To learn more about this study, please call Harry W. Dickerson at the University of Georgia at 404-542-5794.

TO CERTIFY OR NOT TO CERTIFY

Thomas Salt, plant variety examiner at USDA's Plant Variety Protection Office, Agricultural Marketing Service, briefed USDA's Biotechnology Council February 19 on "The Impact of Biotechnology on the Plant Variety Protection Act. Salt's presentation centered on three main areas of biotechnology: transgenic plants, the manipulation of endogenous DNA in tissue culture, and the use of biotechnological methods in determining differences between populations of plants.

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Biotechnological methods, such as electrophoresis, restriction fragment length polymorphism analysis, gene amplification, and DNA sequencing have increased our ability to differentiate between varieties. These methods also have the potential to identify differences between varieties which have no other observable differences.

Salt posed the question whether these differences should be considered sufficient to differentiate between varieties for the purpose of granting Plant Variety Protection. The Plant Variety Protection Act requires distinct, recognizable, principal characteristic differences in order to grant protection for new varieties. He said the acceptance of differentiating varieties at the DNA sequence level as conforming to the legal requirement of a characteristic difference may diminish the value of the protection currently provided by a Plant Variety Protection certificate. To learn more about these and other plant protection issues, please call Thomas Salt at 301-504-5518.

ABRAC TO LOOK AT CATFISH PROPOSAL

At the March 11-13 meeting of USDA's Agricultural Biotechnology Research Advisory Committee (ABRAC), the panel will discuss a transgenic catfish research proposal submitted by Auburn University's Alabama Agricultural Experiment Station. Using recombinant DNA technology, researchers inserted a growth hormone gene from rainbow trout into channel catfish.

In a similar study initiated last year, carp were genetically modified with the trout gene and the transgenic offspring/fry placed in confined outdoor research ponds. The effect of the new gene on growth, development, and behavior of the carp fry is being measured. Similar measurements are proposed by Auburn for the transgenic catfish offspring.

Other meeting highlights will include the introduction of nine new ABRAC members, an overview of international biotechnology activities, a briefing by Alvin Young, ABRAC executive secretary, on the President's new biotechnology research initiative, and a discussion of the Animal and Plant Health Inspection Service's biotechnology activities.

The meeting is open to the public and takes place at the Rosslyn Westpark Hotel, Georgetown Room, 1900 N. Fort Myer Drive, Arlington, VA 22209. It begins at 9 a.m. For further details, please call the Office of Agricultural Biotechnology (OAB) at 703-235-4419; Fax 703-235-4429.

NEWS AROUND THE NATION (AND THE WORLD)

ANIMAL WELL-BEING TOPIC OF CENTER RESEARCH

Texas A&M University's Center for Biotechnology Policy and Ethics is supporting the study of issues related to the ethical and policy aspects of animal biotechnology. The Center is also co-sponsoring a workshop with the National Agricultural Biotechnology Council entitled "Animal Biotechnology: Challenges and Opportunities" that will be held May 27-29 in College Station, Texas. For more information about the workshop or to order the discussion papers, call 409-845-5434.

TROPICAL BIOTECH NETWORK

A proposal is on the drawing boards to create an international Tropical Biotech Network (TroBioNet), according to last December's issue of *EBIS*, a publication of the European Communities (EC). The Network's goal would be to improve agriculture in tropical areas of the world. It is hoped that such a network could help alleviate some of the academic isolation felt by scientists working in less developed countries. A key component of TroBioNet would be database exchanges. To learn more about the program, please call Claude Fauquet at 1-619-554-2906; Fax: 1-619-554-6330.

PRESIDENT GIVES 'THUMBS UP' TO BIOTECHNOLOGY

The President has selected biotechnology research as a budget initiative for Fiscal Year 1993 in recognition of its technological importance. The President's budget proposes \$4.03 billion for biotechnology research, which is a 7% increase over FY 1992's funding level. Most of the money would support programs in the biomedical arena; agricultural biotechnology research would receive about \$207 million. Twelve Federal agencies participate in the Program. For more details, please call 301-903-3251 and ask for the new publication *Biotechnology for the 21st Century*. It was prepared for the Federal Coordinating Council on Science, Engineering and Technology of the Office of Science and Technology Policy.

FEDERAL SCOPE DOCUMENT PUBLISHED

On February 27, the Office of Science and Technology Policy published in the *Federal Register* (Vol. 57, No. 39) its policy on the "Exercise of Federal Oversight Within Scope of Statutory

Authority: "Planned Introductions of Biotechnology Products into the Environment" (commonly referred to as the scope document). A few of the key points are: 1) Products developed using biotechnology techniques do not pose risks *per se* to human health or the environment; rather, risk depends on the characteristics and use of individual products; 2) oversight is to be exercised "only where the risk posed by the introduction is unreasonable"; 3) agencies have a wide variety of oversight options to choose from, depending on the gravity and type of risk being addressed, the benefits to society and environment, and the costs of oversight; 4) the six examples of "categories for exclusion" written into the scope document proposal in July 1990 have been deleted; and 5) existing agency statutory laws remain unchanged.

CATHOLIC U OFFERS SUMMER TRAINING

The Catholic University of America, Washington, DC, is offering the following classes this summer: Polymerase chain reaction techniques, DNA sequencing, recombinant DNA methodology, current techniques in plant biotechnology, DNA-binding proteins/transcriptional regulators, and protein and nucleic acid separation techniques. For course descriptions, class dates, and registration information, please call 202-319-6161 or fax your inquiry to 202-319-4467.

PACIFIC RIM CONFERENCE: FIRST ANNOUNCEMENT

The Third Pacific Rim Biotechnology Conference will be held August 19-21 in Taipei, Taiwan, Republic of China. According to the Development Center for Biotechnology in Taiwan, which serves as host, the purpose of this year's meeting is to strengthen mutual interests and set up a network for academicians and industrialists. For more information or to receive a program, call Charles Peng at 202-895-1931; fax: 202-895-1939.

INTERNATIONAL CROP SCIENCE MEETING

On July 14-22, 2,000 researchers from more than 100 countries are expected at Iowa State University in Ames, Iowa at the first international crop science congress. The meeting will focus on sustainable agriculture, environmental change, biodiversity, crop improvement, and advances in basic crop sciences. The winner of the 1992 world food prize will also be announced. The Crop Science Society of America and Iowa State University are organizing the congress. For more details, call Brian Meyer at 515-294-0705.

NEW CHINA-EC BIOTECH CENTER OPENED

On November 1, 1991, the China-EC Biotechnology Center in Beijing was officially opened, according to the December 1991 issue of *EBIS*. The Center's goal is to promote scientific and technological cooperation between research institutes of the People's Republic of China and those of the member nations of the EC in the biomedical and agricultural biotechnology arenas.

IN CASE YOU WEREN'T THERE

■ "U.S. Competitiveness in Biotechnology and Commercialization of Products" was the theme of a presentation given by Maryln Cordle, OAB senior regulatory specialist, at the annual meeting of the American Society of Animal Science, Regulatory Agencies Committee, February 24, in Rockville, MD. Cordle reviewed the President's FY 1993 budget initiative for biotechnology, international issues, and regulatory activities at USDA. She highlighted the Food Safety and Inspection Service's (FSIS) policy announced in December regarding slaughter of non-transgenic livestock and poultry from transgenic experiments, and a points-to-consider document now available from FSIS that provides decision criteria for the evaluation.

■ The Congressional Biotechnology Caucus and the Senate Agriculture Committee hosted a briefing on agricultural biotechnology in Washington, DC, Feb. 27. It was presented by Robert Nicholas, executive director of the National Agricultural Biotechnology Council (NABC) and other Council members and focused on recommendations made at a workshop held in May 1991 at the University of California, Davis.

In the area of herbicide tolerance in crops, NABC said the primary goal of research should be to ensure safer use of herbicides. Also, farmers need to learn about various options and how to incorporate them into their farm management plan. It was also agreed that biological control methods should be pursued more vigorously and be placed on the national agenda. Participants also recommended that the social impact of animal growth promoters be assessed along with the processes for regulating them. The proceedings and findings of the Davis workshop are in NABC's third report entitled "Agricultural Biotechnology at the Crossroads: Biological, Social and Institutional Concerns." To receive a copy, call 607-254-4859 or fax your request to 607-255-2428.

NEW PUBLICATIONS

■ "Biotechnology in Agriculture: The Next Decade," is a new report by David Glass and Julianne Lindemann. Published by Decision Resources. For more information send a fax to 617-273-3048.

■ Journal of Chemical Technology & Biotechnology. 1992 (Volumes 53-55). Published for SCI by Elsevier Applied Science, Essex, England. For more information, call 081-594-7272; Fax: 081-594-5608.

UPCOMING MEETINGS

Mar. 10: Science Report and Symposium. Herndon, VA. Sponsored by Virginia Commonwealth University, Virginia's Center for Innovative Technology, Richmond Ambassadors, Metropolitan Economic Development Council, and the *Wall Street Journal*. Please Fax inquiries about registration to 804-343-7167.

Mar. 11-12: Agro-Industrial and Forestry Research and Technology Days. Brussels, Belgium. Sponsored by the Commission of the European Communities, Directorate General XII. Call 32-2-647-8780. The FAX number is 32-2-640-6697.

Mar. 11-13: Meeting of USDA's Agricultural Biotechnology Research Advisory Committee. Rosslyn Westpark Hotel, Rosslyn, VA. Call the OAB for more details at 703-235-4419; Fax: 703-235-4429.

Mar. 23-27: Recombinant DNA: Techniques and Applications. This is a 5-day course that covers the latest rDNA procedures. A basic knowledge of nucleic acids is helpful but not necessary. Sponsored by the American Type Culture Collection. Washington, DC. For more information please call 301-231-5566.

Apr. 10-16: "Crop Improvement via Biotechnology: An International Perspective." Keystone, Colorado. For details please write to Keystone Symposia, P.O. Box 2156, Dillon, CO 86435.

Apr. 23-25: Biotechnology Science and Commercial Applications. Hilton Head Island, SC. Call Barbara Cole at Patent Resources Group Inc. at 202-223-1175.

Apr. 27-28: Tenth Annual ATCC Biotechnology Patent Conference. Washington, DC. Sponsored by the American Type Culture Collection. Please call 301-231-5566 for details.

May 11-14: Second International Symposium on the Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms. Goslar, Germany. Call the OAB at 703-235-4419; FAX: 703-235-4429.

May 17-20: The Association of Biotechnology Companies' Sixth International Biotechnology Meeting. San Diego, CA. Phone: 202-234-3330; Fax: 202-234-3565.

May 27-29: "Animal Biotechnology: Challenges and Opportunities." College Station, Texas. The meeting is sponsored by the National Agricultural Biotechnology Council. Call 607-254-4859; FAX: 607-255-2428.

June 14-17: 1992 International Biotechnology Conference on Food Biotechnology. Baltimore, MD. For more information send a fax to Laura Kurie at 301-913-0351.

June 20-24: "Molecular Crop Agriculture for the Pacific Rim" is the topic of the first conference in a series of the University of California, Davis-Pacific Rim Food and Agricultural Biotechnology Conference Series. Sacramento, CA. For details call Carolyn Norlyn at 916-757-3331; fax: 916-757-7943.

June 24-26: Corn Utilization Conference. St. Louis, MO. Co-sponsored by the National Corn Growers Association and Ciba-Geigy Seed Division. For more details call 314-275-9915 or write to National Corn Growers Association/Corn Utilization Conference IV, 1000 Executive Parkway, Suite 105, St. Louis, MO 63141.

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Biotechnology Notes is written by Marti Asner, public affairs specialist in USDA's Office of Agricultural Biotechnology. Suggestions for future issues are always appreciated and may be sent to USDA/OAB, Room 1001, Rosslyn Plaza East, 14th and Independence Ave., S.W., Washington, DC 20250-2200. Phone: 703-235-4419; Fax: 703-235-4429.

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